APPENDIX A

Addendum A

S.H. Bell Company
Stateline Terminal
Discussion of Calculations for Primary Supplemental Environmental Project

The goal of the primary supplemental environmental project (SEP) involves the capture and control of particulate emissions generated from the transfer of outgoing product at the Ohio side of the Stateline Terminal. This goal will be accomplished through the design and installation of a truck load out shed that will enclose the operation, where a negative pressure will be applied to the enclosure and exhausted to a 45,000 acfm baghouse. This represents the best available technology for this type of material handling operation. Currently, product load out via trucks occurs within a "lean-to" load out shed which passively reduces the generation of particulate emissions.

Pollution reduction estimates for total suspended particulate (TSP) and PM-10 have been calculated for the installation of the product truck load out shed with baghouse, both on an actual and potential basis, and have been summarized in Table A-1. As shown in Table A-1, the calculated pollution reduction estimates for TSP and PM-10 are 2.0 tons/yr and 0.9 tons/yr, respectively, on an actual basis and 7.7 tons/yr and 3.6 tons/yr, respectively, on a potential basis. The TSP emissions reduction on an actual annual basis represents an approximate 6.5% reduction of actual annual facility-wide TSP emissions. This value for PM-10 is approximately 8% of actual annual facility-wide PM-10 emissions.

Tables A-2 through A-5 provides detailed calculations of baseline emissions and projected emissions following SEP implementation for the product truck load out shed. A description of each table is as follows:

Table A-2	Product Truck Load Out Shed (Ohio Side), Baseline Actual Emissions
Table A-3	Product Truck Load Out Shed (Ohio Side), Projected Actual Emissions (Post-SEP)
Table A-4	Product Truck Load Out Shed (Ohio Side), Baseline Potential Emissions
Table A-5	Product Truck Load Out Shed (Ohio Side), Projected Potential Emissions (Post-SEP)

Noteworthy items regarding the calculations and associated methodology is as follows:

1. Emission factors utilized for baseline and projected emissions calculations are characteristic of the current AP-42 Section 13.2.4, Aggregate Handling and Storage Piles (Fifth Edition, Updated November 2006), specifically Equation 1, which is utilized for continuous or batch material drops;

2. Baseline actual throughput and projected actual throughput are identical and are based on the historical maximum actual production values that have occurred within the last ten years. These values are based on: 1) outbound bulk tonnage by truck for the East

Liverpool Terminals, 2) an estimation that 90% of the load out (by tonnage) occurs at the Stateline Terminal, and 3) estimation that there is an equal distribution of outbound bulk tonnage between Pennsylvania and Ohio;

3. Baseline potential throughput and projected potential throughput are based on the proposed restriction within S.H. Bell's Facility Permit to Operate Application, Revision 1.0 (June 2004) of 1,779,000 tons/yr of processed/stored material to outbound trucks (Ohio / Pennsylvania combined) and, for the purposes of this calculation, an assumed equal distribution between Pennsylvania and Ohio load out;

4. Baseline control efficiency for the existing load out shed (i.e., partial building enclosure) is estimated at 50%, based on examination of other load out control efficiencies from OEPA's RACM document and AP-42;

5. Implementation of the SEP is projected to result in the capture and control of a minimum of 98% of the particulates that could be generated.

Additional calculation details are contained within the footnotes to each spreadsheet.

TABLE A-1

S.H. BELL COMPANY

Stateline Terminal
East Liverpool, Ohio

Summary of Pollution Reduction Estimates from Primary Supplemental Environmental Project
Product Truck Load Out Shed (Ohio Side)

Emission Source	Baseline Emissions (tons/yr)		Projected Emissions Following SEP (tons/yr)		Pollution Reduction Estimate (tons/yr)	
	TSP	PM-10	TSP	PM-10	TSP	PM-10
Actual Basis Product Truck Load Out Shed (Ohio Side)	2.0	1.0	0.08	0.04	1.96	0.93
Potential Basis Product Truck Load Out Shed (Ohio Side)	8.0	3.8	0.32	0.15	7.67	3.63

TABLE A-2

S.H. BELL COMPANY
East Liverpool, Ohio
Stateline (Ohio) Terminal

ACTUAL BASELINE EMISSIONS FOR PRODUCT TRUCK LOAD OUT SHED (OHIO SIDE)

Emission Source	Actual Throughput (tons/yr)	Hours of Operation	TSP Emission Factor (lb/ton)	PM-10 Emission Factor (lb/ton)	Passive Control Equipment	Passive Control Efficiency %	ACTUAL BASELINE Average Hourly Emissions TSP (lbs/hr)	PM-10 (lbs/hr)	Annual Emissions TSP (tons/yr)	PM-10 (tons/yr)
Product Transfer Point - truck load out	227,064	5,824	0.0359	0.0170	load out shed	50	0.70	0.33	2.0	1.0

Notes:

1. Emission factors based on AP-42 (Fifth Edition, Updated November 2006), Section 13.2.4 (Aggregate Handling and Storage Piles), using a moisture content of 0.5% for storage piles to outbound trucks transfer point (estimated by S.H. Bell Company) and a representative average wind speed of 9.1 miles/hr from Greater Pittsburgh International Airport.
2. Actual baseline throughput based on historical total maximum actual throughput of outbound bulk by truck (504,586 tons/yr - 2000) and estimation that 90% occurred at the Stateline Terminal. Of this amount, it is assumed there is an equal distribution between Pennsylvania and Ohio (i.e., 504,586 tons/yr x 0.90 x 0.5 = 227,064 tons/yr);
3. Average hourly emissions derived from annual emissions and a 2 shift/day, 7 day/week operating schedule.
4. Passive control efficiency for load out shed estimated at 50%, based on examination of other load out control efficiencies from OEPA RACM document and AP-42.

TABLE A-3

S.H. BELL COMPANY
East Liverpool, Ohio
Stateline (Ohio) Terminal

PROJECTED ACTUAL EMISSIONS FOR PRODUCT TRUCK LOAD OUT SHED (OHIO SIDE) FOLLOWING SEP IMPLEMENTATION

Emission Source	Actual Throughput (tons/yr)	Hours of Operation	TSP Emission Factor (lb/ton)	PM-10 Emission Factor (lb/ton)	PROJECTED UNCONTROLLED ACTUAL Hourly Emissions: TSP (grains/hr)	PM-10 (grains/hr)	Control Equipment	Control Efficiency %	PROJECTED ACTUAL Hourly Emissions: TSP (lbs/hr)	PM-10 (lbs/hr)	Annual Emissions: TSP (tons/yr)	PM-10 (tons/yr)
Product Transfer Point - truck load out	227,064	5,824	0.0359	0.0170	9,803.5	4,636.8	load out shed with baghouse	98	0.03	0.01	0.08	0.04

Notes:

1. Emission factors based on AP-42 (Fifth Edition, Updated November 2006), Section 13.2.4 (Aggregate Handling and Storage Piles), using a moisture content of 0.5% for storage piles to outbound trucks transfer point (estimated by S.H. Bell Company) and a representative average wind speed of 9.1 miles/hr from Greater Pittsburgh International Airport.
2. Actual projected throughput based on historical total maximum actual throughput of outbound bulk by truck (504,586 tons/yr - 2000) and estimation that 90% occurred at the Stateline Terminal. Of this amount, it is assumed there is an equal distribution between Pennsylvania and Ohio (i.e., 504,586 tons/yr x 0.90 x 0.5 = 227,064 tons/yr);
3. Average hourly emissions derived from annual emissions and a 2 shift/day, 7 day/week operating schedule.
4. Combined capature and control efficiency for load out shed with baghouse estimated at a minimum of 98%.

TABLE A-4

S.H. BELL COMPANY
East Liverpool, Ohio
Stateline (Ohio) Terminal

POTENTIAL BASELINE EMISSIONS FOR PRODUCT TRUCK LOAD OUT SHED (OHIO SIDE)

Emission Source	Potential Throughput (tons/hr)	Potential Throughput (tons/yr)	Hours of Operation	TSP Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	Passive Control Equipment	Passive Control Efficiency %	ONE POTENTIAL BASELINE HOURLY Emissions TSP (lbs/hr)	PM10 (lbs/hr)	ONE POTENTIAL BASELINE Annual Emissions TSP (tons/yr)	PM10 (tons/yr)
Product Transfer Point - truck load out	165	889,500	8,760	0.0359	0.0170	load out shed	50	3.0	1.4	8.0	3.8

Notes:

1. Emission factors based on AP-42 (Fifth Edition, Updated November 2006), Section 13.2.4 (Aggregate Handling and Storage Piles), using a moisture content of 0.5% for storage piles to outbound trucks transfer point (estimated by S.H. Bell Company) and a representative average wind speed of 9.1 miles/hr from Greater Pittsburgh International Airport.
2. Potential baseline hourly throughput is based on maximum hourly loadout capacity.
3. Potential baseline annual throughput is based on the proposed restriction within S.H. Bell Company's Facility Permit to Operate Application, Revision 1.0 (June 2004) of 1,779,000 tons/yr of processed/stored material to outbound trucks (Ohio / Pennsylvania combined) and an assumed equal distribution between Pennsylvania and Ohio (i.e., 1,779,000 tons/yr x 0.5 = 889,500 tons/yr);
4. Passive control efficiency for load out sheds estimated at 50%, based on examination of other load out control efficiencies from OEPA RACM document and AP-42.

TABLE A-5

S.H. BELL COMPANY
East Liverpool, Ohio
Stateline (Ohio) Terminal

POTENTIAL EMISSIONS FOR PRODUCT TRUCK LOAD OUT SHED (OHIO SIDE) FOLLOWING SEP IMPLEMENTATION

Emission Source	Potential Throughput (tons/hr)	Potential Throughput (tons/yr)	TSP Emission Factor (lb/ton)	PM-10 Emission Factor (lb/ton)	PROJECTED UNCONTROLLED POTENTIAL: Hourly Emissions TSP (grains/hr)	PM-10 (grains/hr)	Control Equipment	Control Efficiency %	PROJECTED POTENTIAL: Hourly Emissions TSP (lbs/hr)	PM-10 (lbs/hr)	Annual Emissions TSP (tons/yr)	PM-10 (tons/yr)
Product Transfer Point - truck load out	165	889,500	0.0359	0.0170	41,490	19,624	load out shed with baghouse	98	0.12	0.06	0.32	0.15

Notes:

1. Emission factors based on AP-42 (Fifth Edition, Updated November 2006), Section 13.2.4 (Aggregate Handling and Storage Piles), using a moisture content of 0.5% for storage piles to outbound trucks transfer point (estimated by S.H. Bell Company) and a representative average wind speed of 9.1 miles/hr from Greater Pittsburgh International Airport.
2. Potential projected hourly throughput is based on maximum hourly loadout capacity.
3. Potential projected annual throughput is based on the proposed restriction within S.H. Bell Company's Facility Permit to Operate Application, Revision 1.0 (June 2004) of 1,779,000 tons/yr of processed/stored material to outbound trucks (Ohio / Pennsylvania combined) and an assumed equal distribution between Pennsylvania and Ohio (i.e., 1,779,000 tons/yr x 0.5 = 889,500 tons/yr);
4. Combined capature and control efficiency for load out shed with baghouse estimated at a minimum of 98%.

Ohio-Side Truck Load-Out Shed with Baghouse

Stateline Terminal, East Liverpool OH

Summary of Project Costs

MTJC, Inc. $182,500

Proposals dated December 5 and December 8, 2006

Included securement of require local and state building permits, foundation work, supply and erection of steel building with automatic doors and pvc strip material as indicated, supply materials and erect "tunnel" at loader access door, dust collector foundation, electrical service modifications, electric powerhouse with service equipment as required by code, pneumatics to dust collector.

J&B Industrial Sales Co. $115,052

Quotation No. Q-06-151-FK dated Nov. 9, 2006 and Quotation No. Q2512 dated Nov. 16, 2006

Includes Flex-Kleen 120-WMTC-480 ARR III dust collector and AirPro BIHS fan. Dust collector and fan rated at 45,000 cfm.

Heim Sheet Metal, Inc. $31,465

Proposal received Dec. 13, 2006

Includes fabrication and installation of ductwork per design drawing.

Diversified Air Systems, Inc. $13,025

Proposal dated Nov. 9, 2006

Includes Sullair Rotary Screw Compressor model 1500e rated at 79 cfm. Also includes air intake filter, refrigerated air dryer, pre-filter, after filter, oil/water condensate separator, and 120-gallon air receiver.

Total Project Cost: $342,042

Excluding Environmental Permitting Costs

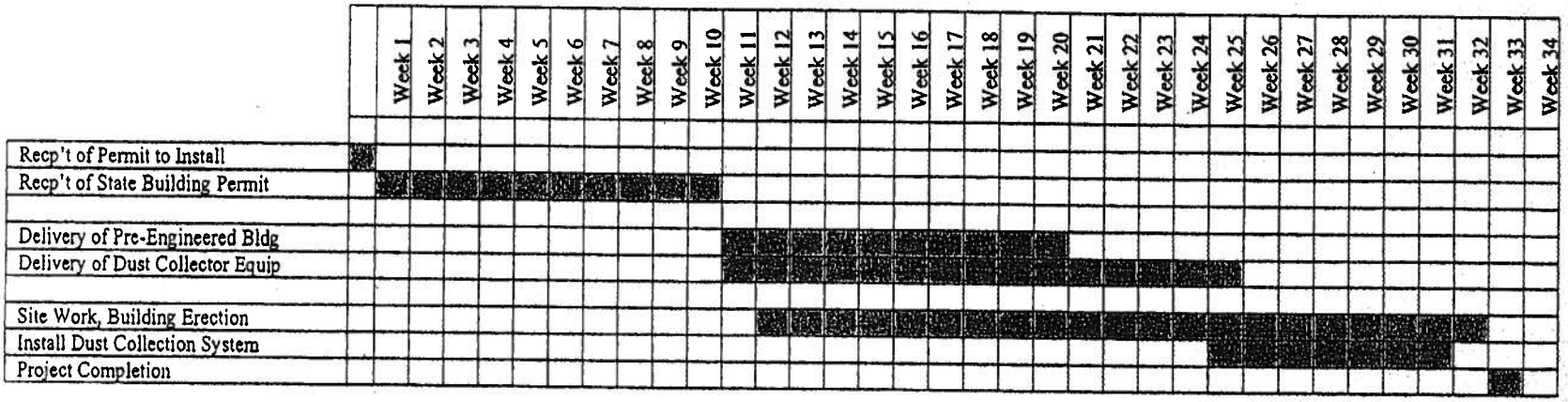
Projected Project Time Line: 33 Weeks after issuance of Permit to install

Prepared by: JRB
Date: 20 Dec 06
Rev: 1

Ohio-Side Load Out Shed with Baghouse

Stateline Terminal

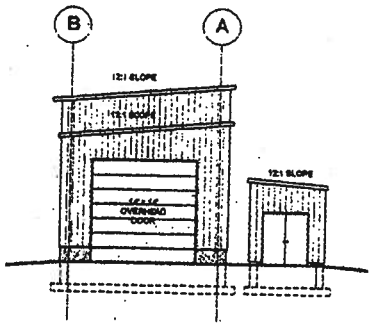
Projected Project Time Line



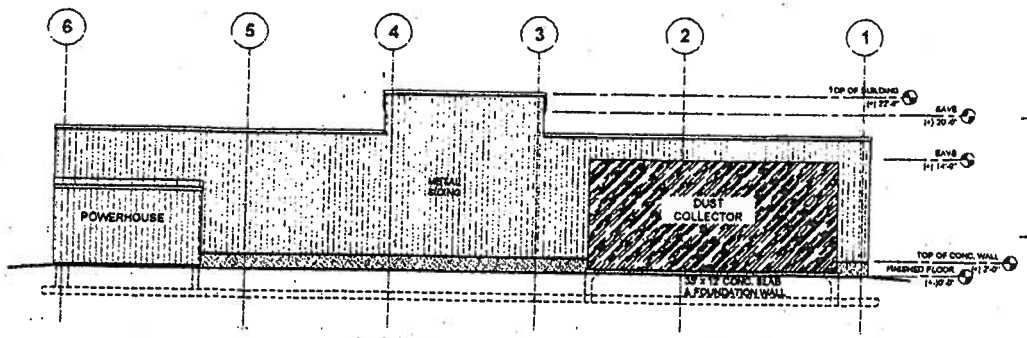
Notes:

1) *Project time line begins after receipt of Permit to Install from Ohio EPA*
2) *Building approval drawings included in the projected timing for receipt of State building permit*
3) *Approval drawings for dust collector included in the delivery time line*
4) *Foundation work for dust collection system included in installation time line*

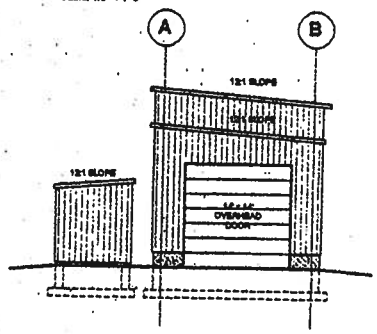
Prepared by: JRB
11 Dec 2006
Rev: 0



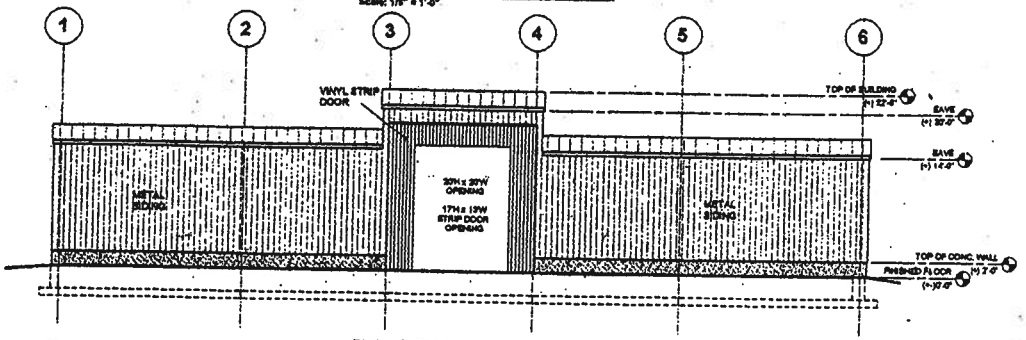
RIGHT SIDE ELEVATION



BACK ELEVATION



LEFT SIDE ELEVATION



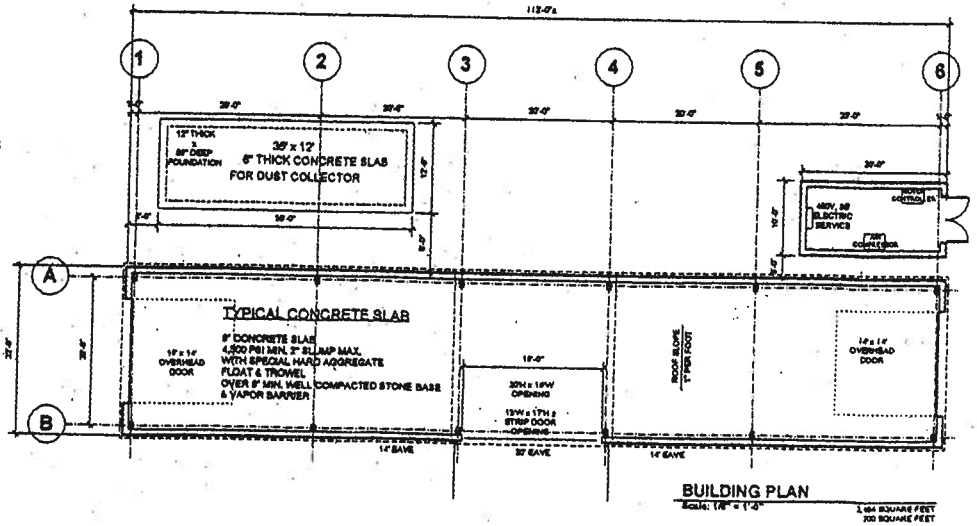
FRONT ELEVATION

BUILDING CONSTRUCTION NOTES:

1. PROVIDE AND INSTALL A NEW BUILDING THAT IS TO BE A PRE-ENGINEERED BUILDING, 110' x 20' WITH 6" CONCRETE FLOOR
2. EXCAVATE AND POUR FOOTINGS 36" BELOW GRADE 12" THICK x 24" WIDE
3. FORM & POUR 24" HIGH x 12" THICK PERIMETER BASE WALL UNDER BUILDING
4. PROVIDE AND INSTALL TWO 14' x 14' OVERHEAD DOORS (ONE AT EACH END) WITH AUTOMATIC OPENERS
5. INSTALL VINYL STRIP DOOR OVER AND AROUND OPENINGS FOR LOADERS (APPROX. 13' x 17')
6. EXCAVATE AND POUR 12" THICK x 24" WIDE FOOTINGS AND FOUNDATION WALLS FOR 12' x 35' DUST COLLECTOR WITH 6" CONCRETE FLOOR
7. EXCAVATE AND POUR 12" THICK x 24" WIDE FOOTINGS AND FOUNDATION WALLS FOR 10' x 20' POWERHOUSE
8. FRAME POWERHOUSE USING 2 x 4 WOOD STUD WALLS, METAL SIDING, 6' WIDE x 7' HIGH STEEL DOOR & FRAME, SLOPED ROOF WITH METAL ROOFING. INTERIOR INSULATED AND FINISHED WITH 1/2" OSB WITH 4" CONCRETE FLOOR

ELECTRICAL

1. PROVIDE AND INSTALL 480V, 3Ø, 600 AMPS NEW ELECTRIC SERVICE
2. RUN POWER TO DUST COLLECTION SYSTEM MOTORS & MISC EQUIPMENT.
3. LIGHTING FOR POWERHOUSE
4. RUN POWER TO TWO AUTOMATIC OPENERS & TWO LIGHTS



BUILDING PLAN

njaa
richard james abraham / architects
The Monroe Building, Third Floor
56 East Monroe Street
Chicago, Illinois 60603
Phone: 312.663.9000
Fax: 312.663.0036

THE PRECEDENT GROUP
917 Commercial Avenue SE
New Philadelphia, Ohio 44663
Office: 330-339-1091 330-933-1964 fax 330-339-1920
E-MAIL

SH Bell Company
2217 Michigan Avenue
East Liverpool, OH 43988

FOR

SH Bell Company
644 Alpha Drive
P.O. Box 11488
Pittsburgh, PA 15238

REVISIONS / ADDENDA

REVISION/ADDENDUM DESCRIPTION	DATE REVISED
1. 10/9/06 - DOORS, NORTH OPENING, ADD EAST OPENING	
2. 12/1/06 - SLAB, STRIP DOOR & SIZE, POWER HOUSE	
3. 12/20/06 - CHANGE 21'6W DOOR	

DOCUMENTS ISSUED

DOCUMENTS	ISSUED TO	DATE ISSUED

DOCUMENT REVISIONS INFORMATION

06018

A1.01

BUILDING PLAN

8 NOVEMBER 2006

MTJC, Inc.
1620 Shadyside Road
East Liverpool, Ohio 43920

Business: 330-385-9022
Cellular: 330-383-3339
Fax: 330-386-4255

December 5, 2006

PROPOSAL

TO: S H Bell Company
2217 Michigan St.
East Liverpool, OH 43920

Re: Building of Ohio side enclosed truck load-out shed

Provide state approved drawings and required building permits.

Excavate and pour footers and foundation walls as per drawings.

Supply and erect pre-engineered steel building. Center bay to be 6' higher than ends for truck loading and dust collection system.

Install doors and automatic openers with remotes on ends of enclosure for loader operators to open and close.

Install PVC strip material to minimize open area where operator dumps truck into.

Pour new concrete floor with smooth finish inside enclosure.

Excavate and pour foundation and pad for dust collector.

Erect dust collector and set fan.

Build electric powerhouse per drawings.

Provide and install all electric equipment and controls for dust collector system and lighting.

Run pneumatic piping lines from compressor to system.

Estimated time line for completion:

Approved drawings 10 weeks.
Pre-engineered building 10 weeks from approval of drawing.
Footers and slabs to be completed while waiting for delivery of building.
After building has been received the project to be completed in 90 days.

Total work by MTJC, Inc. $180,000.00

MTJC, Inc.
1620 Shadyside Road
East Liverpool, Ohio 43920

Business: 330-385-9022
Cellular: 330-383-3339
Fax: 330-386-4255

December 8, 2006

PROPOSAL

TO: S.H. Bell Company
2217 Michigan Ave.
East Liverpool, OH 43920

RE: Extend roof and wall sections at loader access door - Ohio side enclosed truck load-out shed

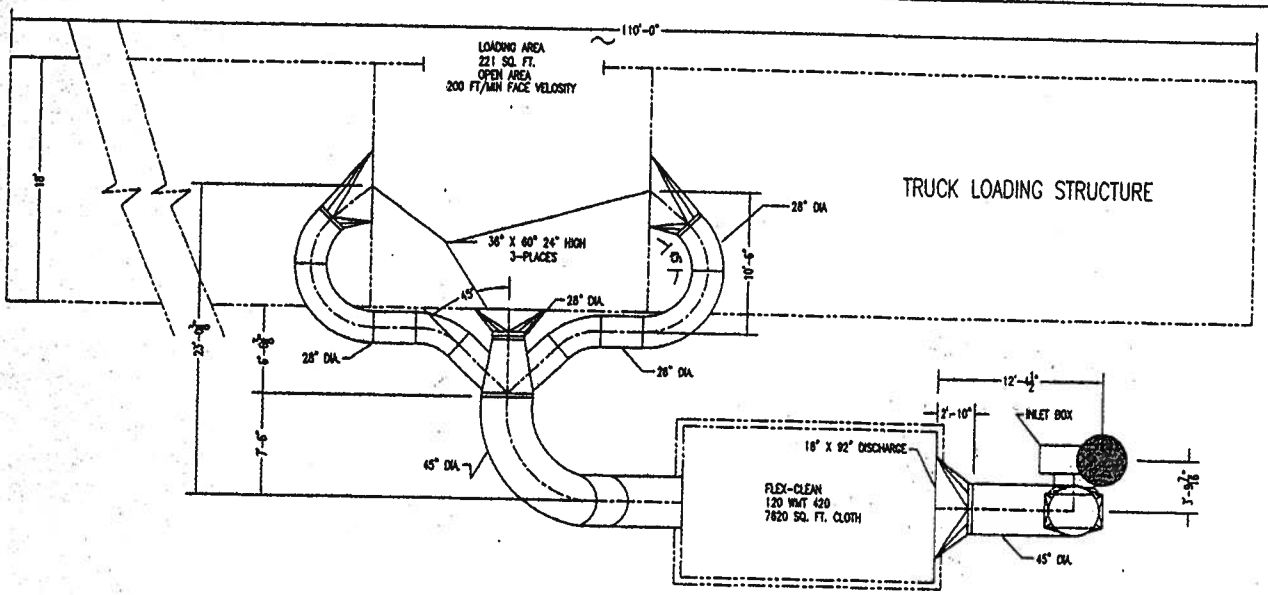
As recommended in the *Engineering Review of Design for Ohio Side Load Out Shed with Baghouse* report submitted by MACTEC Engineering and Consulting, Inc. dated December 7, 2006, we propose the following addition to our December 5, 2006 Proposal:

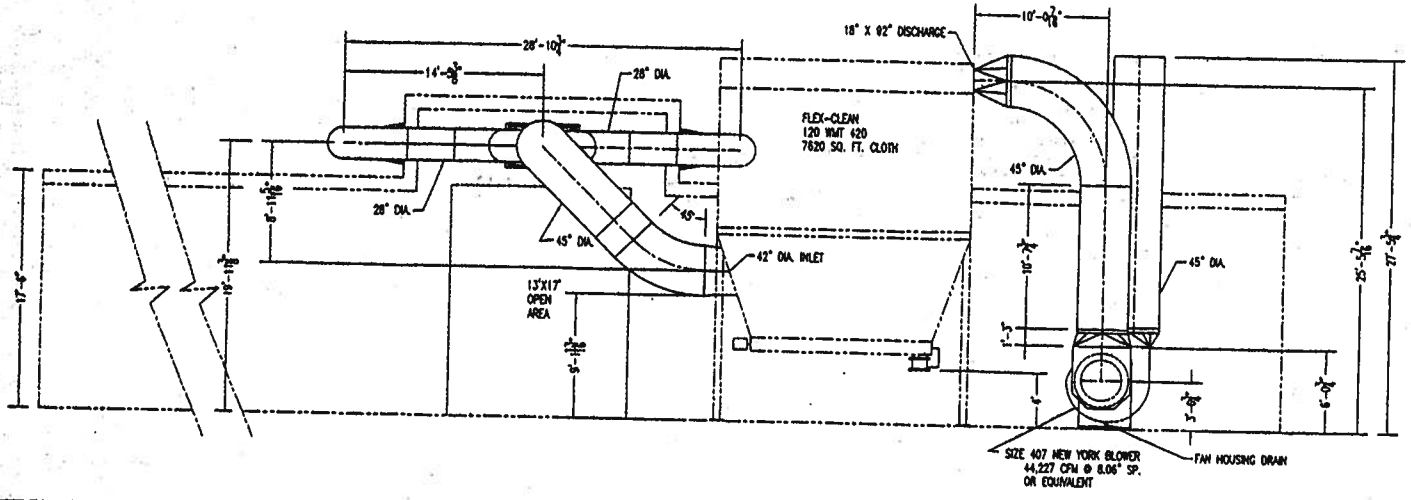
Extend the roof line above the loader access door approximately 8 feet, maintaining the 1:12 pitch.

Frame and sheet side wall sections on both sides of the loader access door and tie into the load out shed enclosure and extended roof section.

Hang PVC strip material around end of loader "tunnel" to minimize open area when loader is present (PVC strip material to remain around original load out shed loader access door as described in December 5, 2006 proposal).

Total: $2,500.00





SYSTEM CALCULATIONS						
DUCT ID...START	1	2	3	A	/C	/F
DUCT ID...END	A	A	A	/C	/F	LP
DIA.,,INCHES	28.0	28.0	28.0	45.0	45.0	45.0
DUCT AREA	4.28	4.28	4.28	11.045	11.045	11.045
DESIGN FLOWRATE	14,733	14,732	14,732	44,227	44,227	44,227
DUCT VELOSITY FT./MIN	3,445	3,445	3,445	4,004	4,004	4,004
DUCT VP...."WG.	0.74	0.74	0.74	1.00	1.00	1.00
HOOD SUCTION..."WG.	0.93	0.93	0.93			
DUCT LOSSES..."WG.	0.44	0.03	0.44	0.42	0.32	0.07
SP @ SEG. END..."WG	-1.36	-0.96	1.36	-2.07	-7.28	
Q CORRECTED...CFM			14,764			
GOVERNING SP...."WG			-1.37			
BLAST GATE DEPTH "		8.5				
BLAST GATE LOSS "		0.40				
COLLECTOR LOSS "WG					6.89	
INLET SYS. EFF..."WG					0.72	
VP....."WG			0.81	0.72		

DUST COLLECTOR AND FAN DATA
FLOWRATE AT INLET TO FAN = 44,227 ACFM
FAN INLET DENSITY = .0748 LBS./CU. FT.
FAN TOTAL PRESSURE WITH SYSTEM EFFECT = 8.07" WG.
AIR HORSEPOWER REQUIRED (FTP X Q/6356) = 56.2

NOTES:
1. ALL ELBOWS ARE 2X CENTER LINE RADIUS UNLESS OTHERWISE NOTED.
2. BRANCHES ARE 45 DEGREES UNLESS OTHERWISE NOTED.
3. FLANGES WILL BE USED FOR EASY REMOVAL OF PIPE AND FITTINGS.
4. ALL PIPE WILL BE MADE OF 14 GA. MILD STL.
5. ALL FITTINGS TO BE OF 12 GA. MILD STL.
6. ALL PIPE AND FITTINGS WILL BE PAINTED WITH ONE COAT GREY PRIMER.

HEIM SHEET METAL, INC. LISBON, OHIO	
SCALE: 1/4"=1'-0"	TITLE: DUST COLL. LOAD-OUT SHED
DWN BY DAB	DWG. NO. 061010-1
DATE 10/20/06	

REC'D DEC 13, 2006

HEIM SHEET METAL, INC.
525 East Chestnut Street,
Lisbon, OH 44432
330.424.7820
Fax: 330.424.0322

S.H. BELL
2217 Michigan Avenue
P.O. Box 1568
East Liverpool, OH 43920

Attention: John Bedeck

Material and labor to fabricate and install dust collection pipe and fittings as per drawing # 061010-1. Material is 12 gauge mild steel for all fittings and pipe will be 14 gauge mild steel. Flanges will be used for ease of installation and maintenance. All material will have one coat grey primer applied. A Crane and man lift will be supplied by Heim Sheet Metal.

Our price for performing this work will be $31,465.00. As soon as we have your approval for this job, we will gladly schedule it for you.

Thank You,

David A. Belaney

President, Heim Sheet Metal, Inc.

J&B Industrial Sales Co., Inc.

November 9, 2006

J & B OFFERING Q-06-151-FK
Via Email jbedeck@shbellco.com

S.H. Bell Company
PO Box 11495
644 Alpha Drive
Pittsburgh PA 15238

Attention: **John Bedeck**

Reference: **Flex-Kleen Dust Collector**

Gentlemen:

We are pleased to offer the following revised FLEX-KLEEN Dust Collector quotation. This quotation does not provide pricing for an airlock or fan. Pricing for these items can be provided at your request.

FOR OPERATING CONDITIONS AS FOLLOWS:

GAS VOLUME:	45,000 ACFM ~~40,000 ACFM~~
GAS TEMPERATURE:	**70° F**
GAS MOISTURE CONTENT:	**Unknown**
TYPE OF DUST:	**Advise**
BULK DENSITY:	**Unknown**
DUST LOADING:	**Light**
DUST PARTICLE SIZE DISTRIBUTION:	**Unknown**
LOCATION:	**Outdoors**
SERVICE:	**Venting (Advise)**

Gas Volume increased to 45,000cfm. Per J&B Industrial Sales on 20 Nov 2006, this 480 bag unit will be OK.

TYPE OF UNIT OFFERED:

MANUFACTURER:	**Flex-Kleen Corp.**
MODEL:	**120 - WMTC- 480 ARR III**
FILTER AREA:	**7,344 sq. ft.**
NUMBER OF FILTERS:	**480**
FILTER SIZE:	**120" long x 6" dia. Nominal**
BAG WT./MATERIAL:	**16 oz. "Polyester"**
CAGE CONSTRUCTION:	**11 gauge Mild Steel**
DRAWING REFERENCE:	**A-91JP-012**
AIR/CLOTH RATIO:	**5.45:1 @ 40,000 ACFM** [redacted]
HOUSING CONSTRUCTION:	**All Welded Stiffened Mild Steel**
DESIGN PRESSURE:	**-20"W.G.**
COMPRESSED AIR REQ'D:	**50.0 SCFM @ 90-100 PSIG**
SHIPPING PIECES:	**The collector will be shipped in one (1) piece plus one lot of legs, cages, filters, etc.**

GENERAL DESCRIPTION:

- All welded 12 gauge mild steel clean air plenum with lift off roof access doors with Gasketing rated for 250 degrees F
- Externally flanged and bolted 10-gauge mild steel tube sheet
- 18" x 104" rectangular flanged outlet
- Compressed air header assembly complete with aluminum diaphragm valves and brass solenoid valves, prepiped and wired into a NEMA 4 terminal strip enclosure mounted on air header.
- Removable Mild Steel Schedule 40 internal air piping
- Galvanized steel bag cages with riveted aluminum venturis
- Solid state timer with NEMA 4 enclosure
- Air pressure gauge
- Differential pressure gauge, Magnehelic style
- Mild steel welded housing bolted to the clean air plenum at tube sheet and flanged at the bottom of housing for bolting to the hopper (12 gauge)
- Bolted side access port with gasketing rated for 250°F
- Welded 12 gauge mild steel trough hopper.
- 46" Flanged Inlet with Abrasion Resistant Baffle to prevent high speed particles from impinging on the bags and to evenly distribute airflow.

- Hopper discharge designed to mate with a 9" x 16' Screw Conveyor. Includes 2HP (230/460/3/60) TEFC screw conveyor drive
- 10" x 10" HDT Airlock including 1-1/2HP TEFC drive (230/460/3/60), cast iron housing, 8 vane mild steel rotor with beveled tips
- Provide a Common Support Structure designed for Seismic Zone 1 (70 MPH wind loading). Providing 4'-0" clearance beneath the rotary valve discharge flange.
- Roof railing (3 sides)
- Access Platform including a walkway running the full length of one side of the dust collector on the air header side, ladder and fall back cage.

PAINTING:

- All exterior M.S. surfaces only are to be power tool cleaned (SP-3), and are to receive one-(1)-coat(s) of SW industrial enamel to 2.0 mils min. DFT.

BASE PRICE: F.O.B. Factory **$97,108.00/each**

WEIGHT: **Estimated Shipping Weight is 25,000 lbs.**

OPTIONS (add to base price):

A. Provide a Photohelic Differential Pressure gauge/switch to control pulsing of the bags based on differential pressure. Unit is mounted in a Nema 4 enclosure.
Add ... $340.00

DELIVERY: Drawings for Approval: 2-3 weeks
Delivery: 10-12 weeks after drawing approval.

EMISSION STATEMENT:

"FLEX-KLEEN CORPORATION Pulse Jet Collectors are designed such that particulate matter concentrations in the effluent gas will not exceed an average of 0.02 grains/per dry standard cubic foot, for all particles over two microns in diameter. Collectors must be properly installed, maintained and operated per design conditions."

TERMS: Prices quoted on FLEX-KLEEN original equipment will be firm for 30 days. Prices on this equipment will remain firm for shipment up to six months from date of order. Beyond this six-month period, escalation as outlined in FLEX-KLEEN'S Terms and Conditions Form will apply. Auxiliary equipment will be invoiced at the price prevailing at time of shipment. Flex Kleen Terms and Conditions to Apply.

NOTE: All freight will be billed directly by the delivering carrier. The customer should indicate on his order whether he would prefer collect or third party billing.

ORDERING: If a purchase order should result from this offering, we ask that it be mailed to the following address:

FLEX-KLEEN CORPORATION
c/o J & B Industrial Sales Co.
20 Eastgate Industrial Drive
Grove City PA 16127

Sincerely,

Jeff Trettel

Jeff Trettel/ Sales Engineer

(Click here to return to myAirPro) (Click here for quotation without T&C) (Click here to edit)

myAirPro
AirProFan.com

AirPro Fan & Blower Company * 4858 Hwy 17 North * PO Box 543 * Rhinelander * WI 54501 * Tel 715-365-FANS * Fax 715-365-3268

AirPro / Rep Contact Information

Name:	Jeff Trettel	Email:	jpt@jbindustrial.com
Address:	20 Eastgate Industrial Dr.	Tel:	724-458-0700
	Grove City, PA 16127	Fax:	724-458-6888

Quotation

Customer:	SH Bell Co.	Quotation No:	Q2512
Attention:	John Bedeck	Ref:	Revised Application
Address:	PO Box 11495	Date:	11/16/2006
	Pittsburgh PA 15238	Validity:	60days
		Tel:	412-963-9910
email:	jbedeck@shbellco.com	Fax:	

General Conditions of Sale

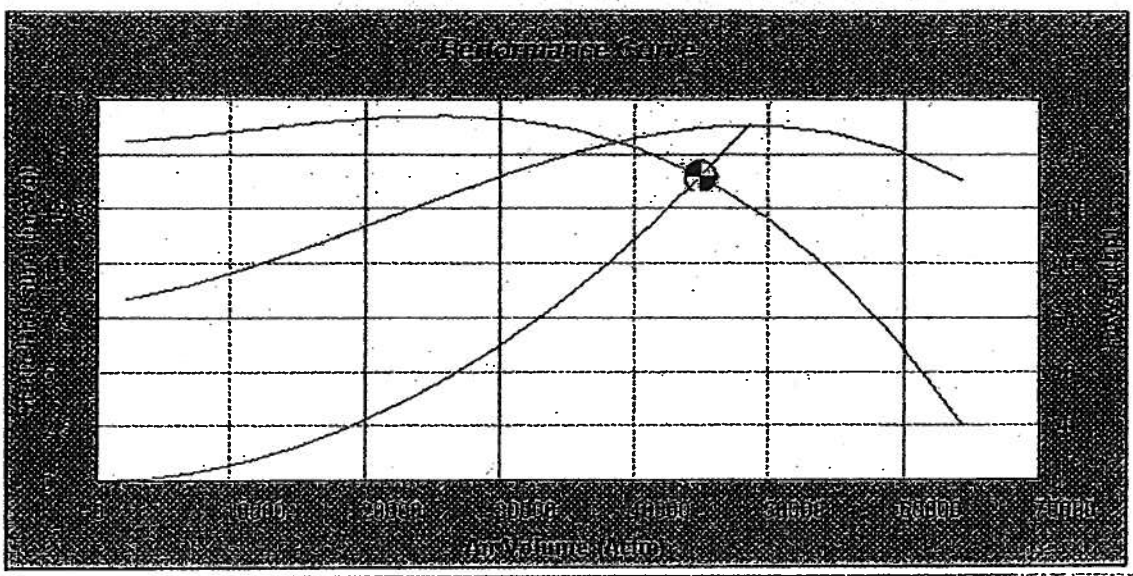
Estimated lead time:	6 weeks.
Shipping Instructions:	Best way collect FOB Rhinelander, WI USA.
Pricing Terms:	Prices do not include freight or taxes.
Payment terms:	Net 30.
Engineering Drawings:	General Arrangement drawing (AutoCAD format) 2 weeks after receipt of purchase order. (please specify contact name and email address).

Fan Details and Performance

Fan Type:	BIHS	Speed (rpm):	1717
Size:	402	Density (lb/ft3):	0.071
Class:	4	Volume (Acfm):	45000
Width (%):	100	Static Pressure (in.wg):	14
Arrangement:	1	Brake Horsepower (hp):	129.8
Discharge:	360	Static Efficiency (%):	77
Rotation:	CW	Temperature (F):	70
		Elevation (ft):	500

Fan Type: BIHS

Size: 402; Speed: 1717rpm; Density: 0.071lb/ft3; Width: 100%; Class 4



------ Static Pressure ------- System Resistance ------- Power

Performance and Power indicated does not include drive losses.

Sound Data

Noise levels based on Hemispherical Free Field conditions.
(Directivity = 2 , Measurement Distance = 5ft)

Octave Bands		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
In/Outlet	Snd Power (Lw dB)	113	114	113	108	105	101	96	90
	Estimated Snd Pressure (Lp dB)	102	103	102	97	94	90	85	79

Estimated Overall Inlet Noise Level = 100dBA

Pricing

Description	Weight (lb)	Unit Price ($)	Ext. Price ($) Qty=1
Basic Fan *	2516	6637.00	6637
☑ Motor (150hp, TEFC, Frame: 445T)	1664	5566.00	5566
☑ Drive Set	129	1193.00	1193
☑ Inlet Damper	250	2595.00	0
☐ Outlet Damper	0	0.00	0
☑ OSHA Guards	60	586.00	586
☑ Unitary Base	450	1027.00	1027
☐ APIC_304		0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
Total	5069 lb	$ 17604	$17604

* Basic Fan includes bolted access door (not available for smaller sizes where housing width is too narrow); drain unplugged; flanged and drilled inlet and outlet; industrial enamel coat; ceramic felt shaft seal (except Arr4); and 150F Max Design temp. Please specify with your order any of these features that you do NOT want with your fan. Pricing is not affected by choosing to eliminate any of these features.

(CF = Consult Factory for price)

Additional Notes

TERMS AND CONDITIONS OF SALE

The sale of any equipment or services described or referred to herein at the prices indicated is expressly conditioned upon the terms and conditions set forth below. Any order for or any statement of intent to purchase any such equipment or services, or any direction to proceed with engineering procurement, manufacture or shipment, shall constitute assent to said terms and conditions and a representation that the Buyer is solvent. Any additional or different terms or conditions set forth in any such communication from the Buyer are hereby objected to by AirPro Fan & Blower Co.,LLC, hereinafter referred to as "Seller", and shall not be effective or binding unless assented to in writing by an authorized representative of the company.

TERMS OF PAYMENT

Terms of payment are net thirty (30) days subject to the prior approval of the Seller's Credit Department. Notwithstanding such approval, if in Seller's judgment the Buyer's financial condition does not warrant the continuation of production or shipment on the original terms, the Seller reserves the right to request payment in advance. Overdue accounts will bear interest at the prevailing bank rate charged to Seller.

TAXES

Any tax or other governmental charge now or hereafter levied upon the production, sale, use or shipment of goods ordered or sold will be charged to and paid for by the Buyer. Such taxes are not covered in the Seller's price unless expressly so proposed.

FREIGHT CLAIMS

Unless otherwise expressly agreed in writing, delivery of the product is made FOB factory. The liability and responsibility of Seller for the product ceases upon delivery of the product ingood order to the carrier. All claims for damage and shortage in transit are the Buyer's responsibility and the Buyer must file the claim against the carrier. Claims for factory shortage will not be recognized unless such alleged shortage is reported to Seller in writing within ten (10) days after receipt of the product.

ACCEPTANCE AND PRICES

Prices quoted for products manufactured by Seller are subject to acceptance by the Buyer no later than thirty (30) days from the date of the "Quotation Proposal". Prices quoted for items which are not manufactured by Seller such as motors and drives, etc. are subject to change at any time as the cost of such items charged to Seller changes. Prices on orders for products manufactured by Seller are firm provided approval and release for production and shipment is received from the Buyer within ninety (90) days of the date of Seller's receipt of the Buyer's order and the products are shipped within twelve (12) months of the date of Seller's receipt of the Buyer's order. When such approval and release for production is received after ninety (90) days of the date of Seller's receipt of the Buyer's order or release for shipment is received after twelve (12) months of the date of Seller's receipt of the Buyer's order, such prices are subject to adjustment to Seller's prices in effect on the date approval and release from Buyer is received by Seller or at time of shipment. Orders for non-stock equipment released for production and scheduled by Seller cannot be rescheduled by the Buyer unless it is done at least eight (8) weeks before the Seller's scheduled shipping date. If production is started the Buyer must accept delivery when the order is ready for shipment.

CANCELLATIONS

Accepted orders cancelled by the Buyer are subject to cancellation charges for all expenses incurred and commitments made by Seller. The cancellation charges on completed items will be one hundred percent (100%) of the selling price. The aforementioned cancellation charges shall not in any way whatsoever limit Seller's other remedies it may have at law including, without limiting the generality of the foregoing, the ability of Seller to claim and recover any amounts or damages to which Seller would otherwise be entitled by reason of accepted orders cancelled by the customer.

DELAYS

Seller shall not be liable to the Buyer or to any third party for any delays caused by riots, strikes, lockouts, weather, fire, floods, lack of transportation, accidents, the failure of Seller's suppliers to meet their contractual obligations, breakdowns, or any other contingency beyond Seller's reasonable control and receipt of the product by the Buyer shall constitute a waiver of all claims for loss or damage due to delay.

PRODUCT CHANGES

Seller reserves the right to change or modify the product in the interest of continuous product improvement without liability.

RETURNED GOODS

Goods may not be returned except by the written permission of the President or VP of Seller, and when so returned may be subject to a handling charge and transportation costs.

MODIFICATION

These Standard Terms and Conditions may not be modified except by written agreement signed by the President or VP of Seller. The failure of Seller to object to provisions contained in the Buyer's purchase orders or other communications shall not be deemed waiver of the Standard Terms and Conditions hereof or acceptance of such provisions. No other terms and conditions other than the Standard Terms and Conditions contained herein and those terms and conditions with respect to the description of product, quantity and price contained in the "Quotation Proposal" shall be binding upon Seller unless made in writing and signed by the President or VP of Seller. Without restricting the generality of the foregoing, agents and sales representatives of Seller do not have authority to modify these Standard Terms and Conditions.

TERMS AND CONDITIONS OF SALE Cont...

PERFORMANCE

Where performance figures are specified, the equipment offered is based on Seller's experience and best judgment of the Buyer's requirement. Should any modifications be required to meet performance specifications, Seller reserves the right to make these modifications, at Seller's expense. If, in Seller's judgment, a modification problem cannot be readily and economically rectified, it is Seller's option to remove the equipment and refund all payments made to Seller by the Buyer. No other charges will or can be assessed by either the Buyer or Seller.

PATENTS

Except as set forth below, in case any suit or proceeding alleging patent infringement is threatened or instituted against the Buyer and is based upon a claim that any equipment or any part thereof furnished under this contract constitutes an infringement of any United States patent, Buyer agrees that no claim shall be made against Seller unless Buyer has notified Seller promptly in writing of the threat or institution of said suit or proceeding and unless Buyer gives Seller full authority, information, assistance and cooperation in the investigation of all facts and in the preparation and maintenance of any defense. In such event, it is further agreed that Seller shall have the following options: (1) Seller may defend said suit or proceeding in behalf of Buyer and pay all damages and costs awarded therein against the Buyer; or (2) Seller may replace said equipment or part with non-infringing equipment or part; or (3) Seller may procure for the Buyer the right to continue using said equipment; or (4) Seller may remove said equipment or part and refund to Buyer the purchase price less 20% thereof for each year or fraction of a year since the date the same was purchased by Buyer. The foregoing states Seller's entire liability for patent infringement of any equipment or part furnished hereunder which liability shall cease and terminate five years following the date of purchase. The foregoing states the entire liability of Seller for patent infringement by said equipment or any part thereof, and shall not apply to any equipment or any part thereof, manufactured to Buyer's design, nor for any use to which any such equipment may be put as a part of any system, mechanism or process covered by patent rights of others. As to such equipment or part, Seller assumes no liability whatsoever for patent infringement.

SELLER PRODUCT DESIGNS

The design, performance information, and construction detail of Seller wheels and/or assemblies, is proprietary, and remains the valuable property of Seller. By ordering these products, accepting them and the associated information and technical assistance, the Buyer agrees not to copy or duplicate the product or information provided without express written authorization from Seller.

LIMITED PRODUCT WARRANTY:

All products are warranted by the Seller to the original Buyer to be free from defects in materials and workmanship under normal use and service (except in those cases where the materials are supplied by the Buyer) for a period of (18) months from date of shipment from its plant or (12) months from date of installation whichever occurs first. The liability of Seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, FOB factory and at Seller's discretion) for any part or parts which are returned by Buyer during such period provided that the Seller is notified in writing within ten (10) days following discovery of such defects by Buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less; the defective unit is returned to Seller, transportation charges prepaid by Buyer; payment in full has been received by Seller for product sold; and that Seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

Seller cannot guarantee sound pressure levels or dBA.

No warranty made hereunder shall extend to any Seller product whose serial number is altered, effaced or removed. Seller makes no warranty, expressed or implied, with respect to motors, switches, controls, or other components of Seller's product, where such components are warranted separately by their respective manufacturers.

Repairs for motors should be obtained from the nearest authorized motor service center for the make of motor furnished. All motors specified by Seller are of manufacturers with nationwide service facilities.

This warranty is expressly in lieu of all other warranties, expressed or implied, whether statutory or otherwise, including any implied warranty of merchantability or fitness for a particular purpose. In no event shall Seller be liable to Buyer for indirect, incidental collateral, or consequential damages of any kind.

NOTE:

Buyer's failure to pay the full amount owed for the product within sixty (60) days of the date of invoice shall release Seller from any and all liability or obligation arising pursuant to any warranty, expressed or implied, whether statutory or otherwise, including any implied warranty or merchantability or fitness for a particular purpose, made in connection with any contract formed hereunder. Buyer agrees that such failure to pay shall constitute a voluntary waiver of any and all such warranties arising pursuant to such contract.

REGULATORY LAWS AND/OR STANDARDS

The Seller makes no promise or representation that its product will conform to any state or local laws, ordinances, regulations, codes or standards, except as particularly specified and agreed upon for compliance in writing as a part of the contract between Buyer and Seller. Seller's prices do not include the cost of any related inspection permits or inspection fees.

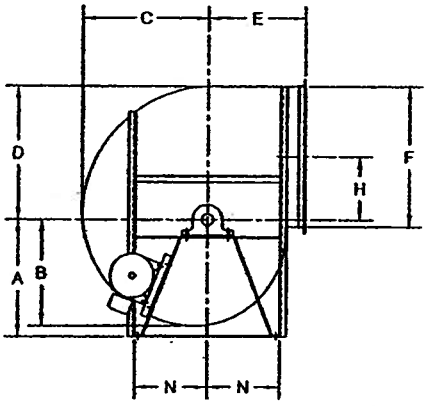
GENERAL

All quotations are made and all orders accepted by the Seller with reference to the laws of the State of Wisconsin and the rights and duties of all persons and the construction and effect of all provisions thereof shall be governed by and construed according to the laws of that state. Should any terms or provisions contained in these conditions violate any or be involved under applicable law, the contract of which these conditions form a part shall not fail by reason thereof but shall be construed in the same manner as if such terms or provisions had not appeared herein. The Seller represents that any goods to be delivered hereunder will be produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. These conditions of sale constitute all the terms in the agreement between Seller and Buyer.

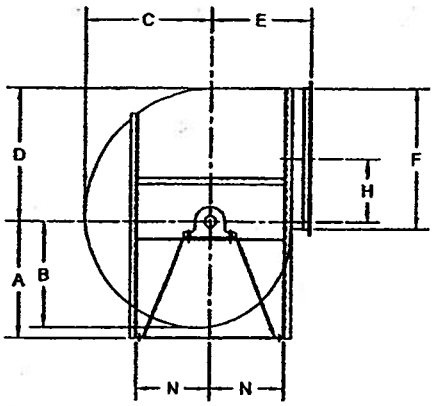
There are no other terms or conditions of sale.

SIZES 402-807 BIHS

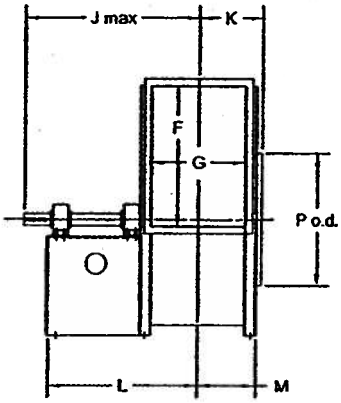
ARRANGEMENTS 1 & 9
NON-ROTATABLE S.W.S.I.
CLASS 2, 3, & 4
DIMENSIONAL DATA

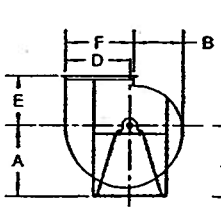


90°
ARRANGEMENT 9
(9L SHOWN)

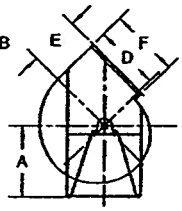


90°
ARRANGEMENT 1

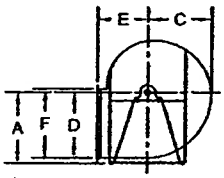




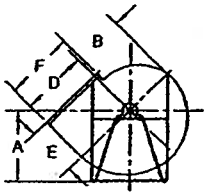
360°



45°



270°



315°

	DISCHARGE		
	45	90	270
	360		315

SIZE	A			B	C	D	E	F	G	H	J	K	L	M	N	P
402	42.00	37.00	47.00	34.06	40.62	42.75	31.00	45.00	30.37	20.25	54.68	21.18	47.18	18.18	23.12	42.25
445	46.00	40.00	52.00	37.62	45.00	47.25	34.00	49.75	33.50	22.37	56.25	22.75	48.75	19.75	25.25	46.50
490	51.00	44.00	56.00	41.50	49.50	52.00	37.00	54.75	36.75	24.62	62.87	24.37	55.37	21.37	27.50	51.00
542	56.00	48.00	62.00	45.87	54.87	57.62	40.00	60.50	40.50	27.37	69.75	28.25	62.25	24.25	30.12	56.25
600	62.00	53.00	69.00	50.75	60.62	63.75	44.00	67.00	45.00	30.25	78.00	30.50	69.50	26.50	33.00	62.00
660	68.00	57.00	75.00	55.81	66.75	70.00	48.00	73.75	49.50	33.12	85.25	34.75	76.75	29.75	36.00	68.00
730	75.00	63.00	83.00	61.75	73.75	77.50	52.00	81.50	54.50	36.75	92.75	37.25	84.25	32.25	39.50	75.00
807	84.00	70.00	93.00	68.25	81.50	85.75	58.00	90.25	60.75	40.62	97.25	39.37	87.25	35.37	44.50	82.75

All dimensions shown are for general information only and should not be used for construction/installation purposes. Only prints marked certified should be used for this purpose.

All fans are shown in clockwise rotation and are viewed from the drive side of the fan (side opposite fan inlet) Counter clockwise fans are dimensionally equal but viewed in a mirror image.

Due to continuing product development and improvement, dimensions are subject to change without notice.

DIVERSIFIED
AIR SYSTEMS, INC.
COMPRESSED AIR INNOVATIONS

November 9, 2006

S.H. Bell Company
2217 Michigan Avenue
East Liverpool, OH 43920

Attn: John Bedeck
Cell: 412.445.4783
Fax: 412.963.1206
Email: jbedeck@shbellco.com

Re: 75 CFM Air Compressor System

Gentlemen,

Per our conversation yesterday we are pleased to offer the following equipment for your consideration.

One - Sullair Air Cooled Rotary Screw Air Compressor to deliver the CFM noted below at 125 PSI complete with 460/3/60 TEFC E-PACT Efficiency Motor, NEMA 4 Dust & Water tight starter, microprocessor monitoring and control system, heavy duty inlet air filter, dual drive – no belts – with guard. Air cooled after cooler/separator/trap, 8000 hour *Sullube* lubricant, and cabinet enclosure to limit noise level to 68 dbA at one meter. FOB Michigan City, IN

Model	HP	CFM	Price
1107e	15	60	$7,975
1500e	20	79	$8,910
1800e	25	99	$9,450

Option:
Package air intake filter to keep inside of cabinet clean.....$235.

One - Sullair Air Cooled Refrigerated Air Dryer to cool SCFM noted below to 35°F pressure dewpoint with 115-1-60 motor, starter, microprocessor monitoring and control system, auto drain, cabinet enclosure. FOB Michigan City, IN

One - Sullair SCF-125 Pre-Filter to remove particles and liquids down to 1 micron with PSID gauge and auto drain.

One - Sullair SCH-125 After-Coalescing Filter to remove oil aerosols down to .01 ppm with PSID gauge and auto drain.

Model	HP	SCFM	Price	Pre-Filter	After-Filter
SR-75	½	75	$1,855	$310	$310
SR-100	¾	100	$2,240	$310	$310

One - Sullair OS-20 Oil/Water Condensate Separator to separate oil from water and make the water EPA compatible. Oil is collected in a separate plastic container for proper disposal.....$770.

One - Vertical 24" dia. x 65" L, 200 PSI Design. 120 gallon, ASME Air Receiver with safety valve, pressure gauge and manual drain valve.....$635.

Option:
115-1-60 Electric Drain Valve.....$145.

Delivery is 6 – 8 weeks.
Terms are Net 30 Days.

Start-up of all equipment is included.

Warranty:

Compressor - Five (5) years air end, motor, coolers and sump tank. One (1) year on rest.

Dryer - Five (5) years on refrigeration compressor, evaporator and condenser. One (1) year on rest.

Other - One (1) year.

Thank you for considering Diversified Air Systems for this project. If we can help further, please let us know.

Sincerely,

E. Vincent Lisi
Diversified Air Systems

Cc: File

ECKERT SEAMANS

Eckert Seamans Cherin & Mellott, LLC
U.S. Steel Tower
600 Grant Street, 44th Floor
Pittsburgh, PA 15219

TEL 412 566 6000
FAX 412 566 6099
www.eckertseamans.com

Scott R. Dismukes
412.566.1998
sdismukes@eckertseamans.com

For Settlement Discussion Only
Not Admissible As Evidence Under Federal Rules of Evidence 408

March 1, 2007

Francis J. Biros, Esq.
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section
P.O. Box 7611
Washington, DC 20044-7611

Re: In the Matter of S.H. Bell Company's Stateline and Little England Facilities

Dear Mr. Biros:

I am writing in furtherance of our ongoing settlement negotiations regarding the S.H. Bell Company, and specifically to provide details regarding S.H. Bell's proposed supplemental environmental project (SEP) for the paving of certain road segments at S.H. Bell's Stateline Terminal in East Liverpool, Ohio. This Road Paving SEP is being proposed in combination with the Ohio Side Loadout Shed SEP, the details of which have already been provided in my letter to you dated December 20, 2006.

The Road Paving SEP involves the paving of two sections of road identified in the attachments, which are currently unpaved, in the area of the straight-side dock at the Stateline Terminal. The project involves the paving of a combined 14,850 square feet of road, at a cost of $44,550.

Enclosed for your review are the following documents:

A. Facility Diagram, showing areas to be paved;
B. MACTEC summary of Emissions Reduction Calculations;
C. J.E. Hughes Paving proposal;

As you can see from the enclosed materials, the project is calculated to result in an estimated 1.58 tons/yr reduction of TSP and 0.45 tons/yr reduction of PM-10 in overall facility actual emissions. A timeline for completion of the SEP will be provided under separate cover. Please note that these estimates are based on the information currently available to the Company and thus are subject to change as the proposed project moves forward to final plans and

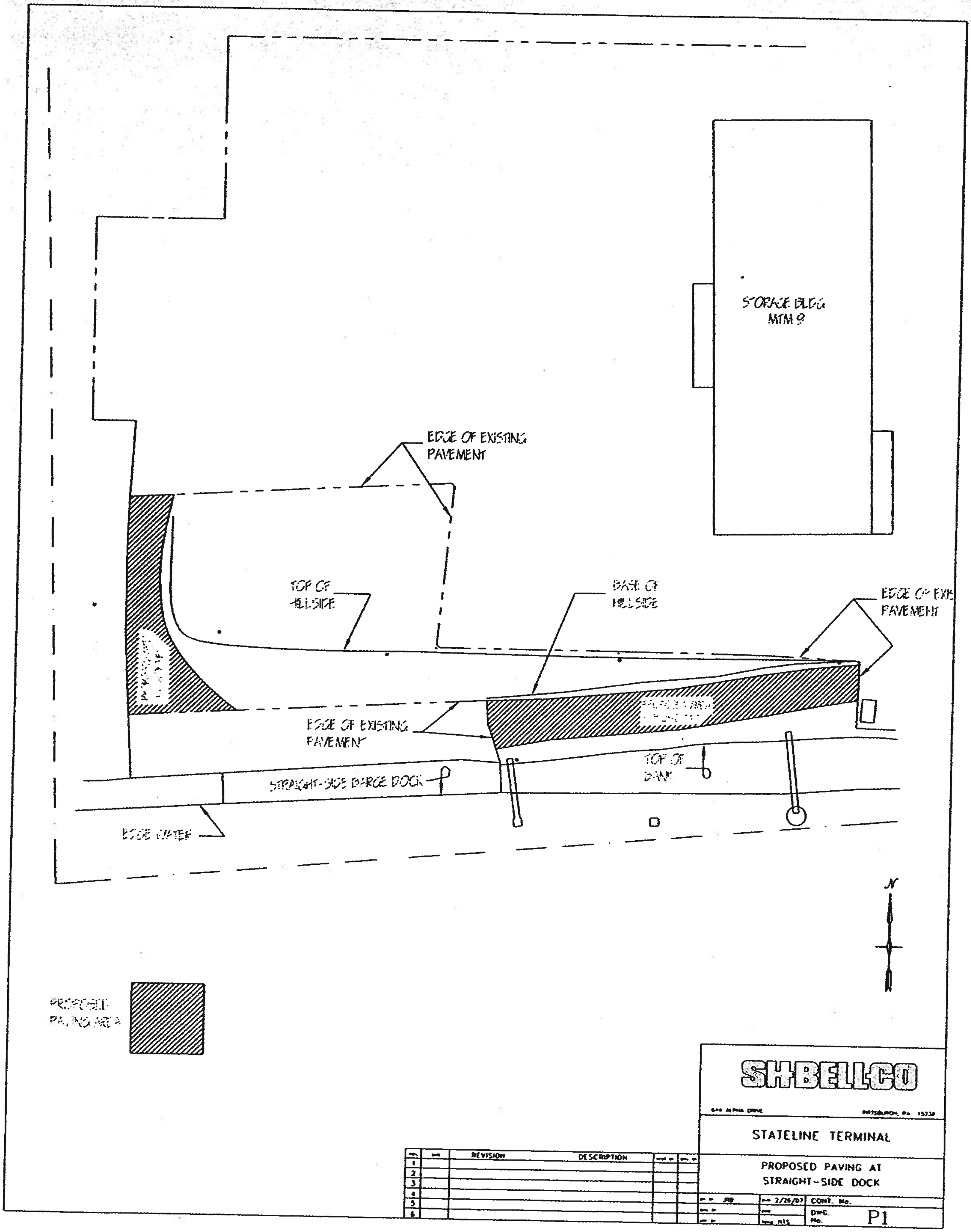
specifications. We believe the information provided with this letter is sufficiently detailed to enable the U.S. EPA to evaluate the efficacy of this project.

Please review this information in the context of U.S. EPA's current supplemental environmental projects policy. We look forward to discussing this project with you in the near future. Should you have any questions, please contact me.

Very truly yours,

Scott R. Dismukes

SRD/lmc
cc: John Matson, Esq.
Charmagne Ackerman
Steven J. Paffilas, Esq.
Mr. John M. Bell
Mr. Rusty Davis


STORAGE BLDG
MTM 9
EDGE OF EXISTING
PAVEMENT
TOP OF
HILLSIDE
BASE OF
HILLSIDE
EDGE OF EXISTING
PAVEMENT
STRAIGHT-SIDE BARGE DOCK
TOP OF
BANK
EDGE WATER
N
PROPOSED
PAVING AREA
SHBELLCO
PITTSBURGH, PA 15239
STATELINE TERMINAL
REVISION
DESCRIPTION
1
2
3
4
5
6
PROPOSED PAVING AT
STRAIGHT-SIDE DOCK
2/26/07
CONT. No.
DWG. No.
P1
NTS

Addendum B

S.H. Bell Company
Stateline Terminal
Discussion of Calculations for Alternative Supplemental Environmental Projects
Paving of Unpaved Roadway Segment

An alternative supplemental environmental project (SEP) involves the paving of the current unpaved roadway segment at the Stateline Terminal, which consists of two 0.05 mile long roadway segments along the route from barge unloading to storage. These are the "in and out" access roads at the Straight Sided Barge Dock. The frequency of truck travel on these segments is directly related to barge unloading throughput. Once paved, roadway dust will be controlled by way of the current paved roadway watering and sweeping program. Currently, the unpaved roadway segment is controlled by watering and chemical stabilization.

Pollution reduction estimates for total suspended particulate (TSP) and PM-10 have been calculated for the change from an unpaved surface to a paved surface, both on an actual and potential basis, and have been summarized in Table B-1.

Tables B-2 through B-5 provide detailed calculations of baseline emissions and projected emissions following SEP implementation for the unpaved roadway segment. A description of each table is as follows:

Table B-2	Unpaved Roadway, Baseline Actual Emissions
Table B-3	Paved Roadway, Projected Actual Emissions (Post-SEP)
Table B-4	Unpaved Roadway, Baseline Potential Emissions
Table B-5	Paved Roadway, Projected Potential Emissions (Post-SEP)

Noteworthy items regarding the calculations and associated methodology is as follows:

1. Emission factors utilized for baseline and projected emissions calculations are characteristic of the current AP-42 sections, as follows:

    - Section 13.2.2, Unpaved Roadways (Fifth Edition, Updated November 2006);
    - Section 13.2.1, Paved Roadways (Fifth Edition, Updated November 2006);

2. Baseline actual throughput and projected actual throughput are identical and are based on historical maximum actual production values within the last ten years relative to inbound barge tonnage for the East Liverpool Terminals and an assumption that 90% of the tonnage occurs at Stateline.

3. Baseline potential throughput and projected potential throughput are based on hourly barge unloading capacity of the Straight Sided Barge Dock and River Barge Crane and 8,760 hours of operation per year and is consistent with the potential throughputs for barge unloading operations identified in S.H. Bell's Facility Permit to Operate Application;

Additional calculation details are contained within the footnotes to each spreadsheet.

TABLE B-1

S.H. BELL COMPANY
Stateline Terminal
East Liverpool, Ohio

Summary of Pollution Reduction Estimates from Alternative Supplemental Environmental Projects
Paving of Unpaved Roadways

Emission Source	Baseline Emissions (tons/yr)		Projected Emissions Following SEP (tons/yr)		Pollution Reduction Estimate (tons/yr)	
	TSP	PM-10	TSP	PM-10	TSP	PM-10
Actual Basis						
Unpaved Roadways	1.96	0.52	0.38	0.07	1.58	0.45
Potential Basis						
Unpaved Roadways	22.82	6.08	4.41	0.86	18.40	5.22

TABLE B-2

S.H. BELL COMPANY

East Liverpool, OH

Fugitive Particulate Emissions From Unpaved Roadways

Baseline Actual Unpaved Roadway Emissions

OEPA EMISSIONS UNIT ID: F001

TSP Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (#/VMT)	TONS THROUGHPUT PER YEAR	TRUCK CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	ACTUAL ANNUAL EMISSIONS (TONS/YR)
Unpaved Road	k	s	a	b	W	p									
Trucks In/Out															
Barge Unloading to Storage	4.9	6.0	0.7	0.45	27	150	4.78	601,327	22	27,333	0.10	2,733	6.53	70	1.96
TOTALS												2,733			1.96

PM10 Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (#/VMT)	TONS THROUGHPUT PER YEAR	TRUCK CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
Unpaved Road	k	s	a	b	W	p									
Trucks In/Out															
Barge Unloading to Storage	1.5	6.0	0.9	0.45	27	150	1.27	601,327	22	27,333	0.10	2,733	1.74	70	0.52
TOTALS												2,733			0.52

EMISSIONS (POUNDS PER VEHICLE MILE TRAVELED, VMT) = $k * (s/12)^a * (W/3)^b * ((365-P)/365)$

WHERE

k = particle size multiplier (no dimension) (for PM10, k = 2.60; for TSP, k = 10.0)
s = silt content of road surface material, %
W = mean vehicle weight, tons
a, b = empirical constants (no dimension)
P = mean number of days with at least 0.01 inches of precipitation per year

BASELINE EMISSIONS

tons/year = pounds/VMT x VMT / 2000 pounds/ton x (1-0.95)

Notes

1. Calculation methodology as per AP-42 Section 13.2.2 "Unpaved Roadways" (Fifth Edition, Updated November 2006)
2. Actual throughput based on year 2000 inbound barge tonnage for the East Liverpool Terminals, and estimation that 90% of the incoming barge tonnage occurred at Stateline
3. Control efficiency based on combination of watering and chemical stabilization activities from OEPA RACM document (90% for chemical stabilization daily May - September, 50% for watering daily)

TABLE B-3

S.H. Bell Company
Stateline Terminal
East Liverpool, OH
PROJECTED ACTUAL EMISSIONS OF PAVING OF UNPAVED ROADWAYS

OEPA EMISSIONS UNIT ID: F001

TSP Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (lb/VMT)	TONS THROUGHPUT PER YEAR	VEHICLE CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
Paved Road	k	sL	W	C	P	N									
Trucks In/Out															
Barge Unloading to Storage	0.082	0.7	27	0.00047	150	365	5.54	601,327	22	27,333	0.10	2,733	7.58	95.0	0.38
TOTALS												2,733	7.58		0.38

PM10 Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (lb/VMT)	TONS THROUGHPUT PER YEAR	VEHICLE CAPACITY (TONS)	TRIPS PER DAY	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	ACTUAL ANNUAL EMISSIONS (TONS/YR)
Paved Road	k	sL	W	C	P	N									
Trucks In/Out															
Barge Unloading to Storage	0.016	0.7	27	0.00047	150	365	1.08	601,327	22	27,333	0.10	2,733	1.48	95.0	0.07
TOTALS												2,733	1.48		0.07

EMISSIONS (POUNDS PER VEHICLE MILE TRAVELED, VMT) = $[k(sL/2)^{A'}(W/3)^{B'} + C](1 - P/4N)$

WHERE:

k = base emission factor for particle size range = 0.016 #/VMT for PM10, 0.082 #/VMT for PM30, i.e., suspended PM.
sL = Silt loading in grams/square meter - median value for iron and steel production utilized, as listed in AP-42, Table 13.2.1-3.
W = Average Vehicle Weight (ton) (e.g. material receipt - 16 tons empty + 38 tons full / 2 = 27 tons average round trip weight)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear
P = mean number of days with at least 0.01 inches of precipitation per year
N = number of days in the averaging period

PROJECTED ACTUAL EMISSIONS

tons/year = pounds/VMT X VMT / 2000 pounds/ton x (1 - 0.95)

Notes

1. Calculation methodology as per AP-42 Section 13.2.1 "Paved Roadways" (Fifth Edition, Updated November 2006)
2. Projected actual throughput based on historical maximum actual inbound barge tonnage for the East Liverpool Terminals (year 2000), and estimation that 90% of the incoming barge tonnage occurs at Stateline
3. Control efficiency based on combination of watering and sweeping activities from OEPA RACM document (75% for sweeping, 80% for watering)

TABLE B-4

S.H. BELL COMPANY

East Liverpool, OH

Fugitive Particulate Emissions From Unpaved Roadways

Baseline Potential Unpaved Roadway Emissions

OEPA EMISSIONS UNIT ID: F001

TSP Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (#/VMT)	TONS THROUGHPUT PER YEAR	TRUCK CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	POTENTIAL ANNUAL EMISSIONS (TONS/YR)
Unpaved Road	k	s	a	b	W	p									
Trucks In/Out															
Barge Unloading to Storage	4.9	6.0	0.7	0.45	27	150	4.78	7,008,000	22	318,545	0.10	31,855	76.06	70	22.82
TOTALS												31,855			22.82

PM10 Emissions using appropriate (k) value below.

SOURCE	EMISSIONS ESTIMATION PARAMETERS						EMISSION RATE (#/VMT)	TONS THROUGHPUT PER YEAR	TRUCK CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	POTENTIAL ANNUAL EMISSIONS (TONS/YR)
Unpaved Road	k	s	a	b	W	p									
Trucks In/Out															
Barge Unloading to Storage	1.5	6.0	0.9	0.45	27	150	1.27	7,008,000	22	318,545	0.10	31,855	20.27	70	6.08
TOTALS												31,855			6.08

EMISSIONS (POUNDS PER VEHICLE MILE TRAVELED, VMT) = $k * (s/12)^a * (W/3)^b * ((365-P)/365))$

WHERE

k = particle size multiplier (no dimension) (for PM10, k = 2.60; for TSP, k = 10.0)
s = silt content of road surface material, %
W = mean vehicle weight, tons
a, b = empirical constants (no dimension)
P = mean number of days with at least 0.01 inches of precipitation per year

POTENTIAL EMISSIONS

tons/year = pounds/VMT x VMT / 2000 pounds/ton x (1-0.95)

Notes:

1. Calculation methodology as per AP-42 Section 13.2.2 "Unpaved Roadways" (Fifth Edition, Updated November 2006)
2. Potential throughput based on combined capacity of Straight Sided Barge Dock Unloading and River Barge Crane Unloading (400 tons/hr each) and 8,760 hours of operation
3. Control efficiency based on combination of watering and chemical stabilization activities from OEPA RACM document (90% for chemical stabilization May - September, 50% for watering daily)

TABLE B-5

S.H. Bell Company
Stateline Terminal
East Liverpool, OH
PROJECTED POTENTIAL EMISSIONS OF PAVING THE UNPAVED ROADWAYS

TSP Emissions using appropriate (k) value below,

OEPA EMISSIONS UNIT ID: F001

SOURCE Paved Road	EMISSIONS ESTIMATION PARAMETERS k	sL	W	C	P	N	EMISSION RATE (lb/VMT)	TONS THROUGHPUT PER YEAR	VEHICLE CAPACITY (TONS)	TRIPS PER YEAR	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
Trucks In/Out															
Barge Unloading to Storage	0.082	9.7	27	0.00047	150	365	5.54	7,008,000	22	318,545	0.10	31,855	88.30	95.0	4.41
TOTALS												31,855	88.30		4.41

PM10 Emissions using appropriate (k) value below,

SOURCE Paved Road	EMISSIONS ESTIMATION PARAMETERS k	sL	W	C	P	N	EMISSION RATE (lb/VMT)	TONS THROUGHPUT PER YEAR	VEHICLE CAPACITY (TONS)	TRIPS PER DAY	MILES PER ROUND TRIP	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	ACTUAL ANNUAL EMISSIONS (TONS/YR)
Trucks In/Out															
Barge Unloading to Storage	0.016	9.7	27	0.00047	150	365	1.08	7,008,000	22	318,545	0.10	31,855	17.22	95.0	0.86
TOTALS												31,855	17.22		0.86

EMISSIONS (POUNDS PER VEHICLE MILE TRAVELED, VMT) = $[k(sL/2)^{0.8}(W/3)^{1.5} + C](1 - P/4N)$

WHERE

k = base emission factor for particle size range = 0.016 #/VMT for PM10, 0.082 #/VMT for PM30, i.e., suspended PM.
sL = Silt loading in grams/square meter = median value for iron and steel production utilized, as listed in AP-42, Table 13.2.1-3.
W = Average Vehicle Weight (ton) (e.g. material receipt = 16 tons empty + 38 tons full / 2 = 27 tons average round trip weight)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear
P = mean number of days with at least 0.01 inches of precipitation per year
N = number of days in the averaging period

PROJECTED POTENTIAL EMISSIONS

tons/year = pounds/VMT X VMT / 2000 pounds/ton x (1 - 0.95)

Notes:

1. Calculation methodology as per AP-42 Section 13.2.1 "Paved Roadways" (Fifth Edition, Updated November 2006)
2. Potential throughput based on combined capacity of Straight Sided Barge Dock Unloading and River Barge Crane Unloading (1,400 tons/hr each) and 8,760 hours of operation
3. Control efficiency based on combination of watering and sweeping activities from OEPA RACM document (75% for sweeping, 80% for watering)

J.E. Hughes Paving
50376 Stagecoach Rd.
East Liverpool, OH 43920
(330) 383-3297

Customer	Estimate
S.H. Bell Company 2217 Michigan Avenue East Liverpool, OH 43920	02/22/07

Description	
1.) Approach straight side dock west approximately 30' x 220'	6, 600 sq. ft.
2.) Approach straight side dock east approximately 30' x 275'	8, 250 sq. ft.
1.) Cut grade 2.) Place and compact #304 Limestone 3.) Place and compact approximately 6" HMA	
	Total 14, 850 sq. ft.
	Total
Labor and material	$44, 550.00